



Operational Risk Management

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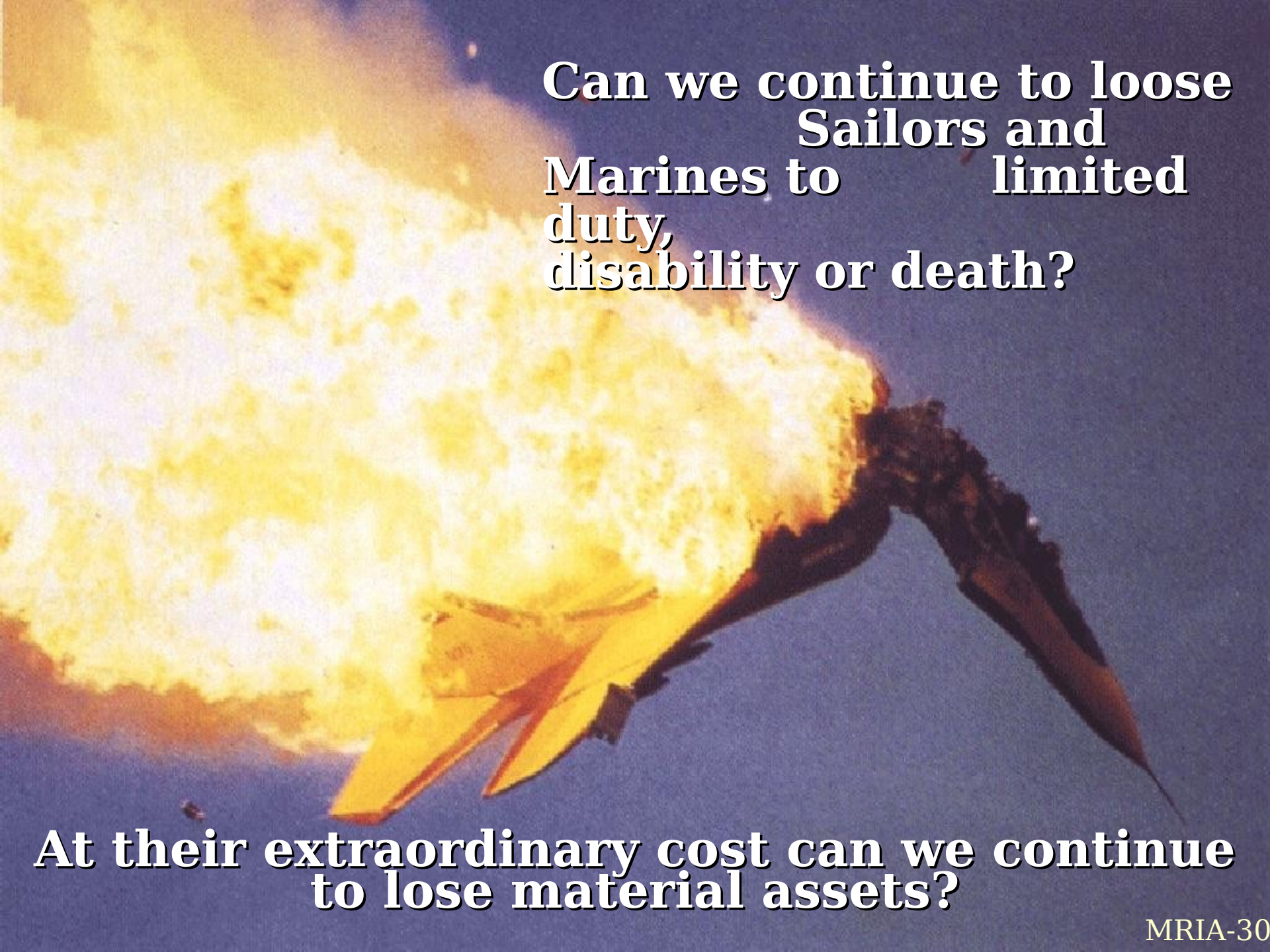
ORM BRIEF

- **WHY ORM? - OVERVIEW**
- **ORM BASICS**
- **FUTURE ORM DIRECTIONS**
- **ORM VIDEO**

ORM GUIDANCE

“ORM applies across the entire spectrum of naval activities, from joint operations and fleet exercises to our daily routine. We must encourage top down interest in the ORM process, from the flag level all the way to the deckplates.”

- ADM J. Johnson, CNO

A fighter jet is shown in flight, leaving a large, bright yellow and orange fireball and a thick black smoke trail behind it. The jet is angled upwards and to the right, with its wings and tail visible. The background is a clear blue sky.

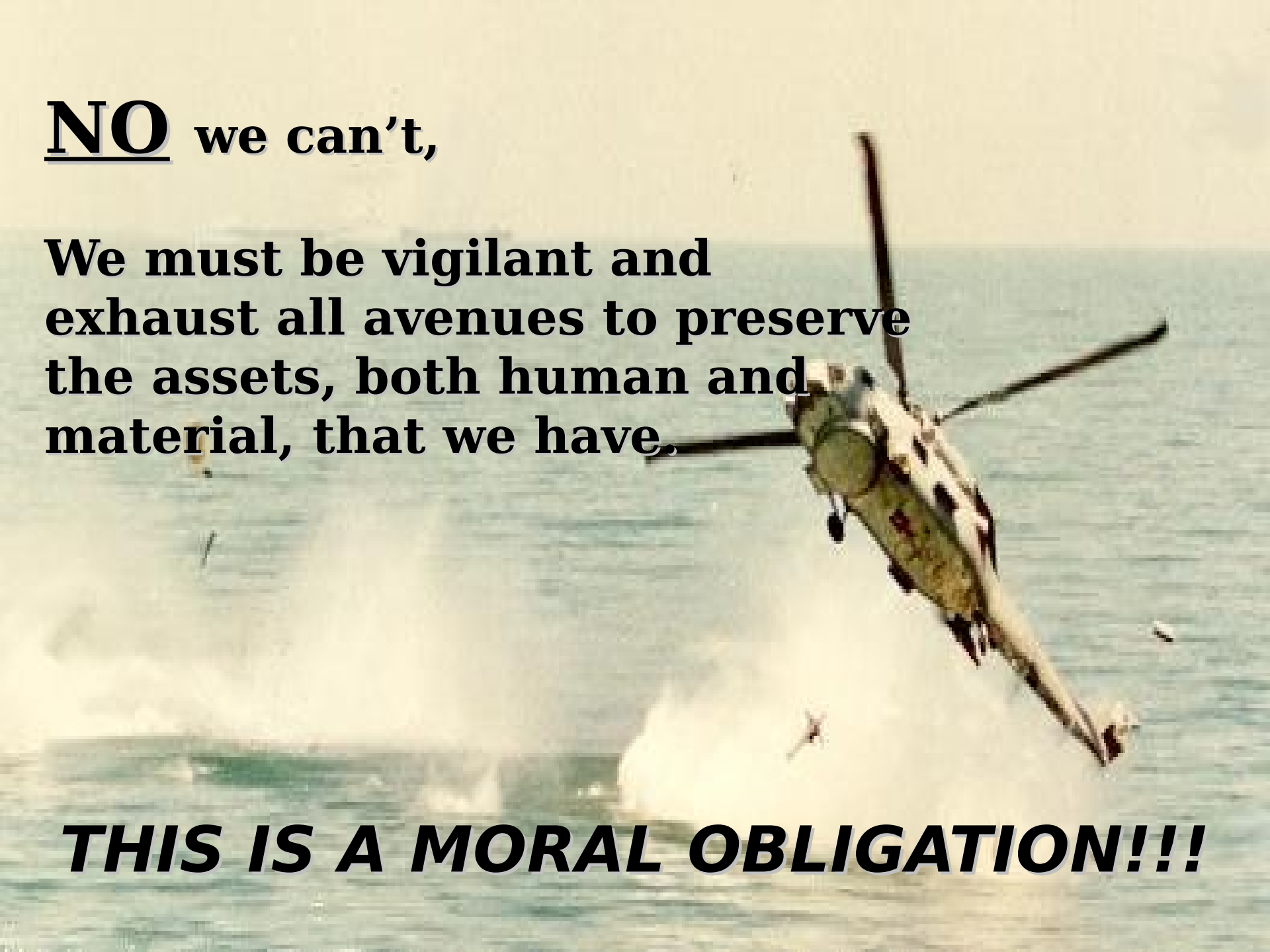
**Can we continue to loose
Sailors and
Marines to limited
duty,
disability or death?**

**At their extraordinary cost can we continue
to lose material assets?**

NO we can't,

**We must be vigilant and
exhaust all avenues to preserve
the assets, both human and
material, that we have.**

THIS IS A MORAL OBLIGATION!!!

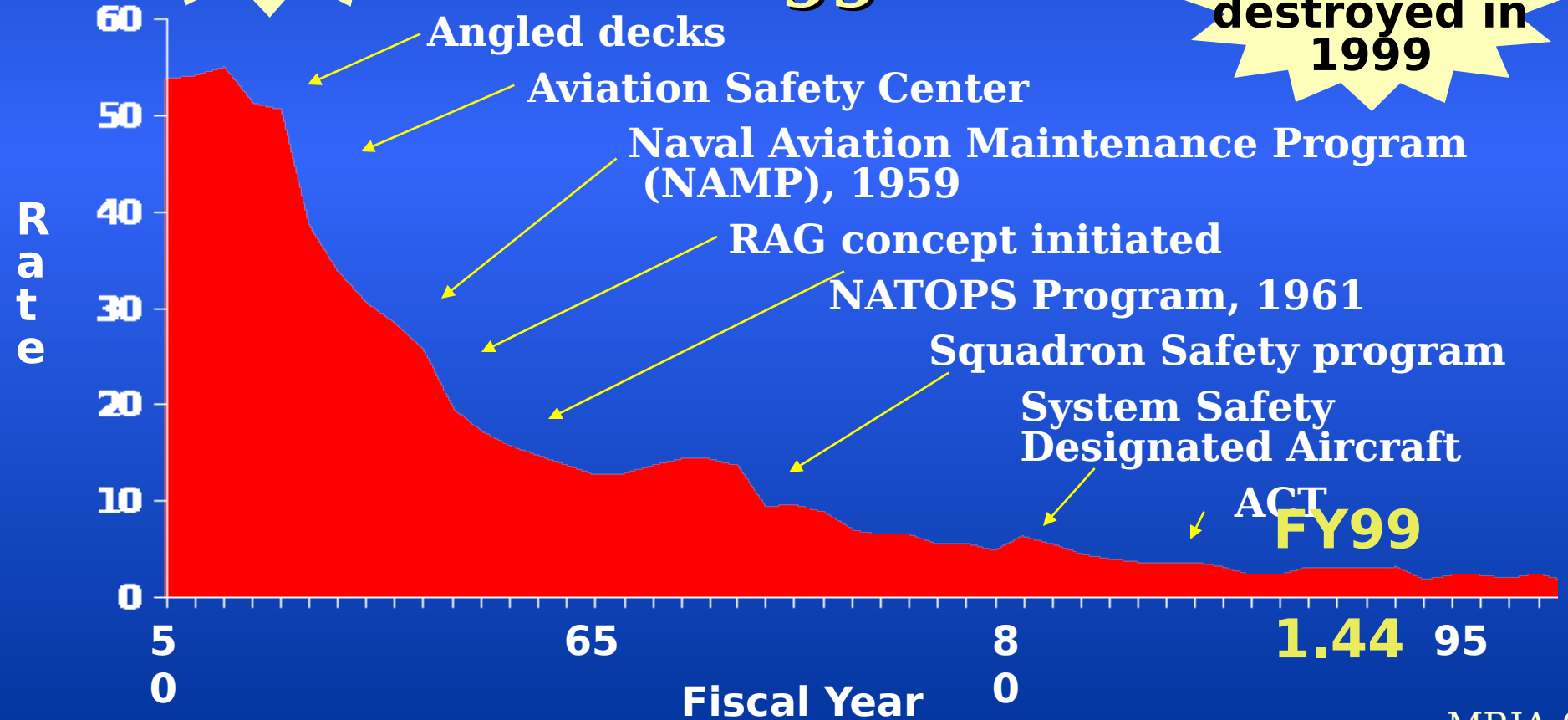


Naval Aviation Mishap Rate

776 aircraft
destroyed in
1954

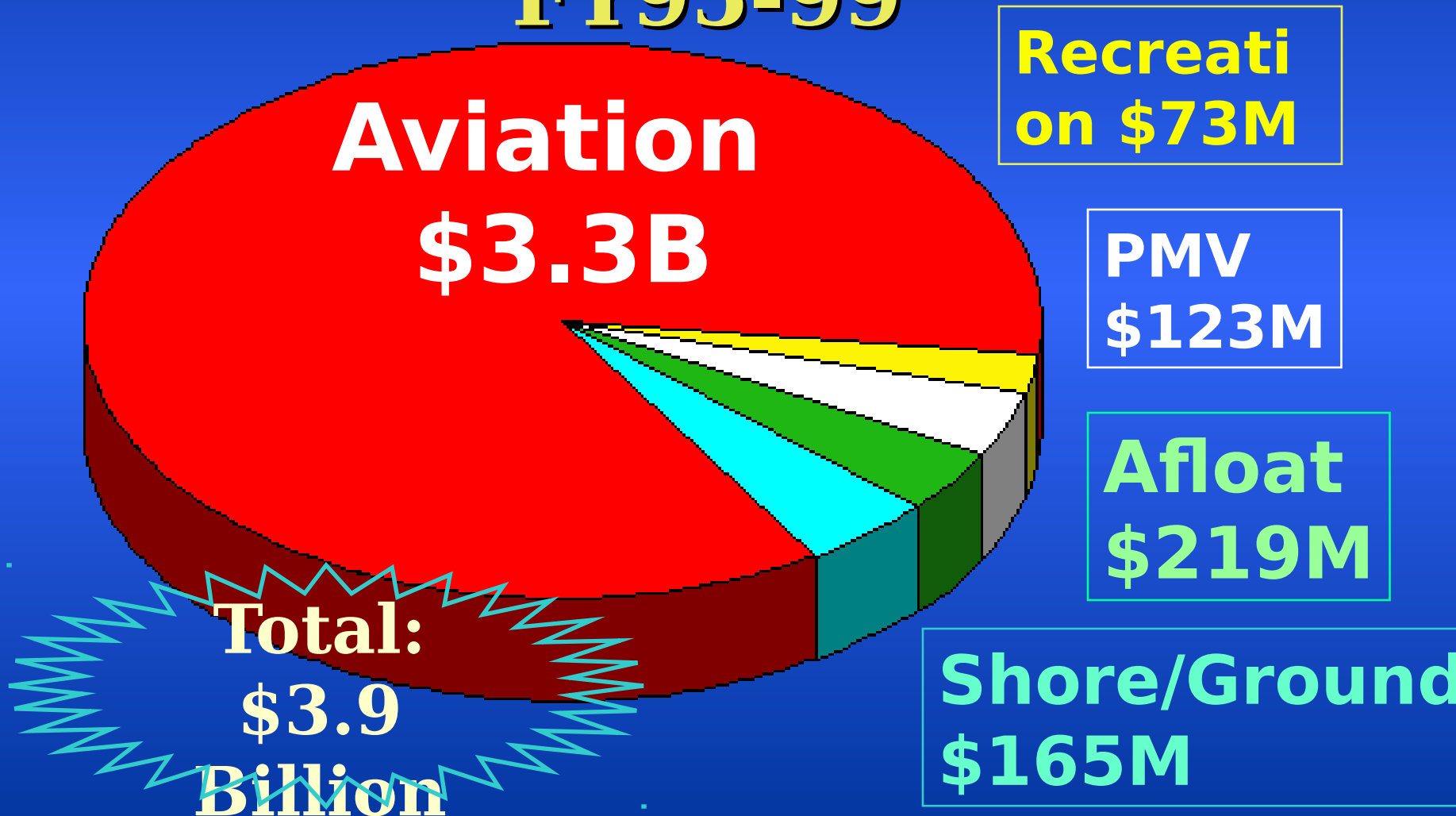
FY50-
99

22 aircraft
destroyed in
1999

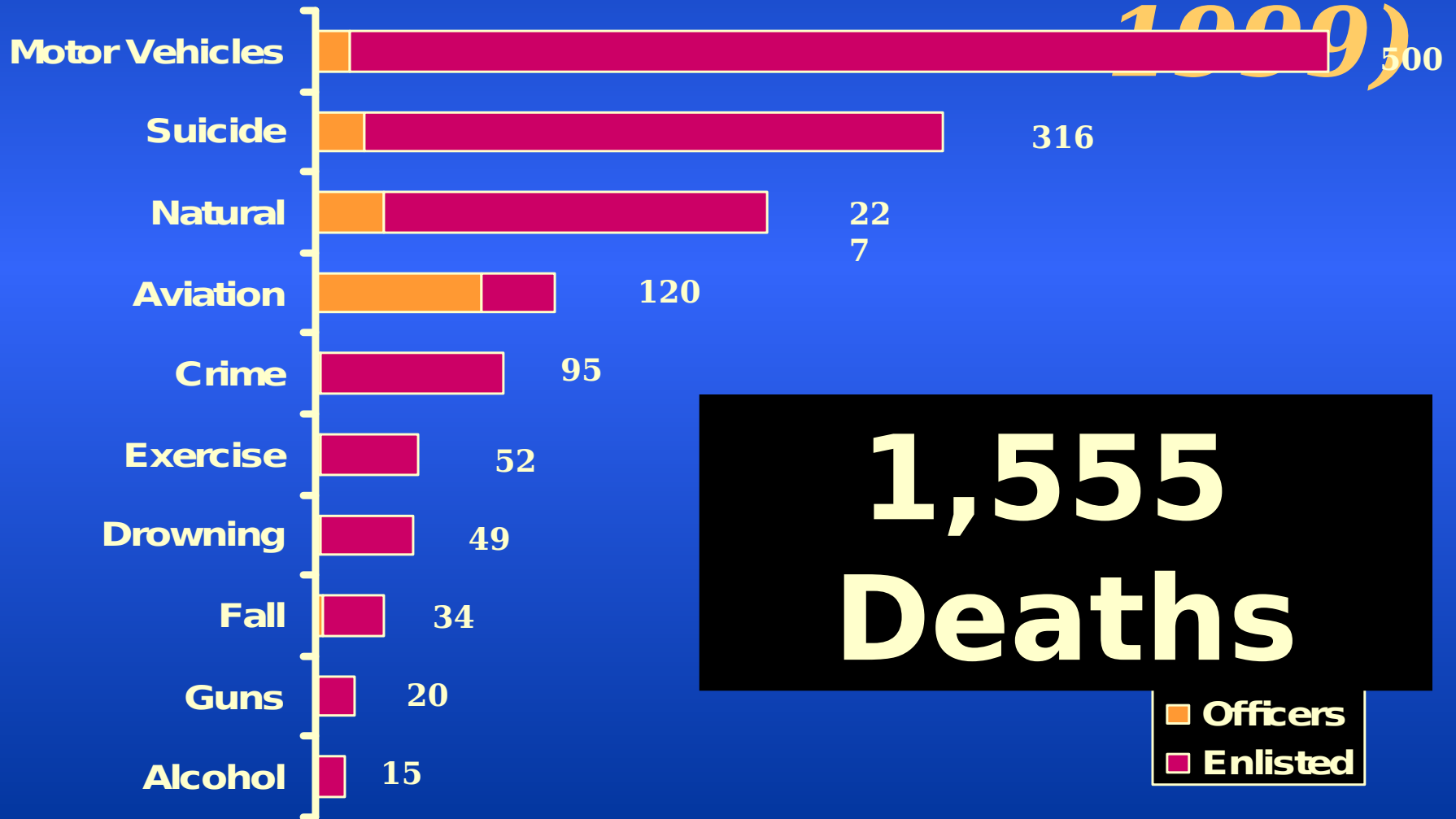


Cost of Mishaps

Navy and Marine Corps,
FY95-99



TOP TEN CAUSES OF DEATHS (1995- 2009)



Causes of Risk

Personal Work Ethic

Complex Evolutions

High Energy Levels

Environmental Influences

New Technology

Feeling of "Invincibility"

Speed, Tempo of Operations

Stress

Resource Constraints

Human Nature

Complacency



Random, hit or miss

Reactive

**Safety as after-thought
types of once plan is done
plan**

**Non-standard process/terms
process/terms**

**“Can do” regardless of risk
decisions**

Definitive approach

Proactive

**Integrates all
of risk into**

Common

**Conscious
based on**



The Process of dealing with risk associated with all that we do.

The process includes Risk Assessment, Risk decision making and implementation of effective risk controls



Benefits

- **Efficient and Effective Mission Accomplishment**
- **Reduction in Personal Injuries and Fatalities**
- **Reduction in Material and Property Damage**

ORM TERMS

HAZARD

A condition with the potential to cause personal injury or death, property damage, or mission degradation.

RISK

An expression of possible loss in terms of **severity** and **probability**.

SEVERITY

The worst credible consequence which can occur as a result of a hazard.

PROBABILITY

The likelihood that a hazard will result in a mishap or loss or cause a mission degradation.

CONTROL

A method for reducing risk for an identified hazard by lowering the probability and/or severity.



543

Steps

Principles

Levels



A 5-Step Process

- ✓ Identify hazards
 - ✓ Assess hazards
 - ✓ Make risk decisions
 - ✓ Implement Controls
 - ✓ Supervise



4 Principles

- Accept risk when benefits outweigh the cost
- Accept no unnecessary risk
- Anticipate and manage risk by planning
- Make risk decisions at the right level



3 Levels of Application

- Time-critical - On the run consideration of the 5 steps
- Deliberate - Application of the complete 5-step process
- In-depth - Complete 5-step process with detailed analysis

While in-port in the Caribbean, the commanding officer wants to hold a flight deck cookout for the crew. As a result 5 of your aircraft must be re-spotted within 1 hour. It is estimated that 10 of your 26 line personnel are present. The weather forecast calls for temperatures in the high 90s with high humidity and possible



Identify Hazards

- ID manageable pieces of the event
- Use experience as a guide
- Ask “What can go wrong?”
- Brainstorm

SCENARIO--HAZARD ID

HAZARDS

- **Aircraft collision**
- **Aircraft lost over side**
- **Personnel hit by moving aircraft**
- **Heat related injury to personnel**
- **Personnel not familiar with flight deck environment present during aircraft moves**
- **Personnel not familiar with aircraft move involved in aircraft move**

2

Assess Hazards
Prioritizes the risks of
identified hazards based
on:

- *Severity* of possible loss
- *Probability* of occurrence

Risk Assessment

Code - (RAC)

1 = Critical

2 = Serious

3 = Moderate

4 = Minor

5 = Negligible

CAT I = Death/ Loss of asset.

CAT II = Severe injury / degradation of asset.

CAT III = Minor injury/ degradation of asset.

CAT IV = Minimal injury/ degradation of asset.

		Probability of Occurrence			
		Likely - Immediate	Probably will occur in time	May occur	Unlikely to occur
		A	B	C	D
S E V E R I T Y	Cat I	1	1	2	3
	Cat II	1	2	3	4
	Cat III	2	3	4	5
	Cat IV	3	4	5	5
Risk Levels Risk Assessment Code					

SCENARIO--HAZARD ASSESSMENT ASSESSMENT

RISK

1. Aircraft collision
2. Utilizing personnel not familiar with the job
3. Personnel present not familiar with environment
4. Heat related problems
5. Personnel hit by aircraft
6. Aircraft lost over side

1. S-I / P-B, RAC=1
2. S-II / P-A, RAC=1
3. S-II / P-A, RAC=1
4. S-I / P-C, RAC=2
5. S-I / P-C, RAC=2
6. S-I / P-D, RAC=3

3

Make Risk Decisions

Consider risk control options

- Risk vs. benefit
- Communicate as required

4

Implement Controls

- Engineering controls
- Administrative controls
- Personal protective equipment

SCENARIO--IMPLEMENT CONTROLS

Aircraft Collision

Brief vigilance and caution

Aircraft lost over the side

Brief specific caution

Heat related problem

Ensure fluids available

Personnel hit by aircraft

Ensure personnel are alert to all hazards

Utilizing personnel not familiar with the job

Use only authorized and briefed personnel

Personnel present not familiar with

environment

Clear environment of non-essential visitors

5

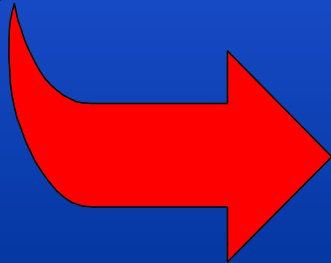
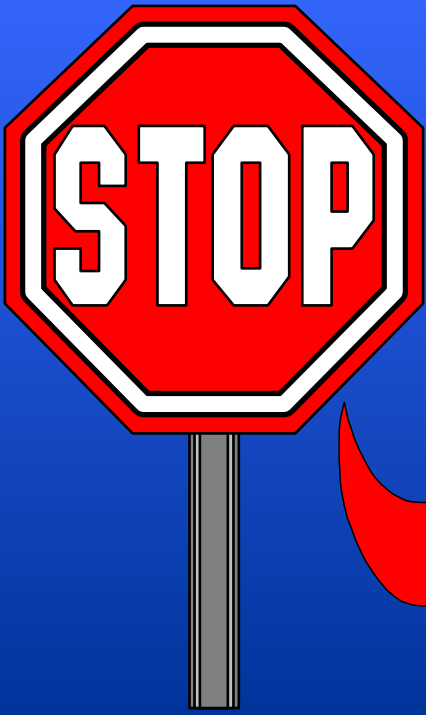
Supervis

- Monitor for control effectiveness
- Watch for changes

“Change is the Mother of All Risks”

If you detect a shift in:

- Plan
- Environment
- Equipment
- Personnel



and evaluate the
Change!!!

ORM GUIDANCE

OPNAVINST 3500.39



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, D.C. 20350-2000
and
HEADQUARTERS
UNITED STATES MARINE CORPS
2 NAVY ANNEX
WASHINGTON, D.C. 20380-1775

IN REPLY REFER TO

OPNAVINST 3500.39
MCO 3500.27
N511
SD
03 April 1997

OPNAV INSTRUCTION 3500.39
MARINE CORPS ORDER 3500.27

From: Chief of Naval Operations
Commandant of the Marine Corps

To: All ships and Stations

Subj: OPERATIONAL RISK MANAGEMENT

Ref: (a) DODINST 6055.1

Encl: (1) Introduction to Operational Risk Management

1. Purpose. In accordance with change 2 to reference (a), establish Operational Risk Management as an integral part of Naval operations, training and planning at all levels in order to optimize operational capability and readiness.

2. Background

a. Uncertainty and risk are inherent in the nature of military action. The success of the Naval Services is based upon a willingness to balance risk with opportunity in taking the bold and decisive action necessary to triumph in battle. At the same time, Commanders have a fundamental responsibility to safeguard highly valued personnel and material resources, and to accept only the minimal level of risk necessary to accomplish an assigned mission.

b. Operational Risk Management is an effective tool for maintaining readiness in peacetime and success in combat without infringing upon the prerogatives of the Commander. Historically, the greater percentage of losses during combat operations were due to mishaps. Unnecessary losses either in battle or in training are detrimental to operational capability. Since 1991, Operational Risk Management, applied to both day-to-day

CO's should ensure ORM is implemented into all levels of the command. Examples include, but are not limited to:

- Train all personnel on ORM
- Incorporate identified hazards, risk assessments & controls into briefings, notices, and written plans.
- Conduct thorough risk assessments for all new or complex evolutionary operations, defining acceptable risk and providing contingencies for the evolution.

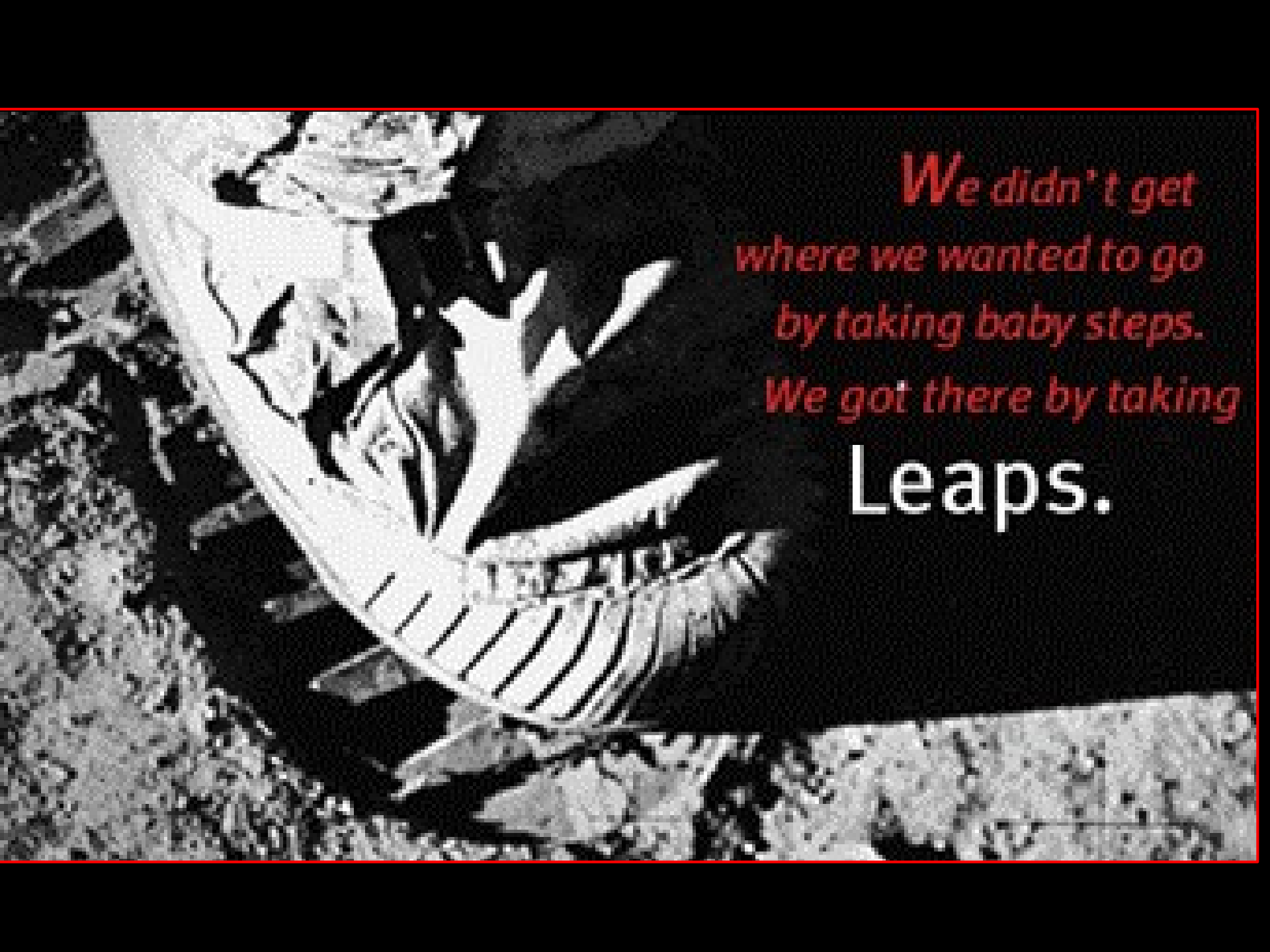
WHERE'S ORM GOING

- *Jumpstart ORM basics training & “how to” for aviation & afloat units*
 - *Training ORM facilitators for all units*
 - *Get ORM into all pipeline training*
 - *Integrate ORM into pubs & pr*

ORM is a process...
***not* a program!**



**It must become an inherent
way of doing business**



*We didn't get
where we wanted to go
by taking baby steps.
We got there by taking
Leaps.*